

IN THE CLAIMS:

1. (Currently Amended) A semiconductor device comprising:
~~a metal interconnects interconnect~~ made from a multi-layer film composed of a first metal film deposited on a semiconductor substrate with an insulating film sandwiched therebetween and a second metal film, which is a seed layer deposited on said first metal film;
an interlayer insulating film formed over ~~said metal interconnects~~ on said second metal film; and
a via hole formed in said interlayer insulating film and for exposing said second metal film; and
a plug made from a third metal film selectively grown on said second metal film that is exposed at the bottom of said via hole,
wherein said seed layer is laminated on said first metal film.
2. (Original) The semiconductor device of Claim 1,
wherein said third metal film is grown by plating.
3. (Original) The semiconductor device of Claim 1,
wherein said second metal film and said third metal film are made from the same kind of metal.
4. (Original) The semiconductor device of Claim 1,
wherein said second metal film and said third metal film are made from a metal including copper as a principal constituent,
said third metal film is grown by plating, and
no adhesive layer is formed between said second metal film and said third metal film.
5. (Original) The semiconductor device of Claim 1,
wherein an air gap is formed between said metal interconnects in said interlayer insulating film.

6. (Original) The semiconductor device of Claim 1,
wherein said first metal film composing said metal interconnects has interconnect resistance substantially 1/5 or less of interconnect resistance of said second metal film composing said metal interconnects.

7. (Original) The semiconductor device of Claim 1,
wherein said first metal film composing said metal interconnects has interconnect resistance substantially equivalent to interconnect resistance of said second metal film composing said metal interconnects.

8. (Withdrawn) A method for fabricating a semiconductor device comprising the steps of:

depositing a first metal film on a semiconductor substrate with an insulating film sandwiched therebetween;

depositing a second metal film on said first metal film, wherein the second metal film is a seed layer;

forming an interlayer insulating film on said second metal film;

forming a via hole in said interlayer insulating film so as to expose said second metal film within said via hole;

forming a plug of a third metal film selectively grown on said second metal film within said via hole;

forming a patterned interlayer insulating film by patterning said interlayer insulating film into the shape of interconnects; and

forming metal interconnects from a multi-layer film composed of said first metal film and said second metal film by etching said multi-layer film with said plug and said patterned interlayer insulating film used as a mask.

9. (Withdrawn) The method for fabricating a semiconductor device of Claim 8,
wherein said third metal film is grown by plating.

10. (Withdrawn) The method for fabricating a semiconductor device of Claim 8,

wherein said second metal film and said third metal film are made from the same type of metal.

11. (Withdrawn) The method for fabricating a semiconductor device of Claim 8, wherein said second metal film and said third metal film are made from a metal including copper as a principal constituent, and
said third metal film is grown by plating on said second metal film with no adhesive layer sandwiched therebetween.

12. (Cancelled).

13. (Previously Presented) The semiconductor device of Claim 5,
wherein the width of said air gap is substantially equal to the space between said metal interconnects.

14. (New) The semiconductor of Claim 1,
wherein said seed layer is formed over the entire surface of said first metal film.

15. (New) A semiconductor device comprising:
a plurality of metal interconnects made from a multi-layer film composed of a plurality of first metal films deposited on a semiconductor substrate with an insulating film sandwiched therebetween and a plurality of second metal films, which are a plurality of seed layers deposited on said plurality of first metal films;
an interlayer insulating film formed on said plurality of second metal films;
a via hole formed in said interlayer insulating film and for exposing one of said plurality of second metal films; and
a plug made from a third metal film selectively grown on said second metal film, which is one of said plurality of second metal films and is exposed at the bottom of said via hole,

wherein each said plurality of seed layers is respectively laminated on each said plurality of first metal films.